



STUDENT REPORT

DETAILS

Name

ZIHAN

Roll Number

3BR23EE113

EXPERIMENT

Title

ELECTIONS

Description

You are the head of the election committee in your village. Each Political party is associated with a unique number and the votes are represented as an integer array A. where each element contains the party number voted for by the villagers. For a party to win, they must have a majority of votes. our task is to find and return an integer value denoting the winning party's number. Return -1 if there is no party with a majority.

Note: If only one vote is there he is the winner.

Input Format :

input1: An integer value representing the number the number of voters

input2: An integer array A representing the votes of the voters.

output Format:

Return an integer value denoting the winning party's number.Return -1 there is no party with a majority

Example 1:

Input:

6
1 1 2 2 2 3

Output:

2

Explanation:

As 2 got the most number of votes i.e 3.

Example 2:

Input:

6
1 2 1 1 2 2

Output:

-1

Source Code:

```
from collections import Counter

def find_winning_party(num_voters, votes):
    # Special case: if there's only one vote, that party is the winner
    if num_voters == 1:
        return votes[0]

    # Count the votes for each party
    vote_count = Counter(votes)

    # Determine the party with the maximum votes
    max_votes = max(vote_count.values())
    winning_party = -1
    majority_count = num_voters // 2

    # Check if the maximum votes are greater than half the total votes
    for party, count in vote_count.items():
        if count == max_votes:
            if count > majority_count:
                if winning_party == -1:
                    winning_party = party # Found a potential winner
            else:
                # More than one party has the max vote count
                return -1

    return winning_party

# Input reading
num_voters = int(input())
votes = list(map(int, input().split()))

# Output the result
print(find_winning_party(num_voters, votes))
```

Explanation:

As both the contestants got same votes there is no majority.

RESULT

3 / 6 Test Cases Passed | 50 %